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Can LinkedIn and Academic.edu Enhance Access to Open Repositories?

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Abstract

The deployment of institutional repository services has focussed on the development of services for managing content within the organisation or by a trusted agency. At the same time we have seen developments to support management of the use of metadata to maximize access to content hosted in repositories. Related technical approaches, such as ‘cool URIs’ can also make content more discoverable by search engines such as Google.

In parallel we are witnessing the increasing take-up of a range of third-party services such as LinkedIn and Academia which are being used by researchers to publish information related to their professional activities, including details of their research publications.

The paper provides evidence which suggests that personal use of such services can increase the number of downloads by increasing SEO (Search Engine Optimisation) rankings through inbound links from highly ranked web sites.

A survey of use of such services across Russell Group universities shows the popularity of a number of social media services. In the light of existing usage of these services this paper proposes that institutional encouragement of their use by researchers may generate increased accesses to institutional research publications at little cost to the institution.

This paper concludes by describing further work which is planned in order to investigate the SEO characteristics of institutional repositories.

Keywords

repositories, social media, SEO, metrics.

1. ABOUT THIS PAPER

A key objective of institutional repositories is to maximize access to research publications. This objective is being realised in a variety of ways. They include: promotion of licences such as Creative Commons which minimise copyright barriers to use of content; development of repository software to support the management of content; development of metadata tools to enhance the discoverability of content and training and advocacy services to support content providers and other users of repository services.

These efforts have arisen in the course of institutional activities, national initiatives, such as JISC-funded development programmes, as well as international ones which generally derive research organisations in Europe, North America, Australia and further afield.

But what role can be played by commercial providers of online services which could help to support sectoral interests? In this paper we describe how researchers can use these services to their advantage in raising the profile of their research and interest in their outputs.

In part, developments to institutional repositories have helped to enhance access to search engines such as Google by, for example, the provision of ‘cool URIs’ [1] which are more easily harvested by search engines. But whilst institutional repository services are addressing certain search engine optimisation techniques, other approaches, such as maximising inbound links to resources, will require other approaches.

This paper provides a case study which suggests that inbound links to papers hosted in an institutional repository from popular third-party services can have a significant effect on the numbers of downloads. Following on from this, an analysis of use of such third-party services by Russell Group universities is provided.

The paper concludes by looking at how commercial publishers are encouraging authors to use social media sharing services promote access to papers hosted by publishers. The paper suggests that institutions should adopt similar approaches to maximise access to papers hosted on open repositories, although it is acknowledged that further evidence of the benefits of such approaches should be gathered.

2. PERSONAL EVIDENCE OF THE BENEFITS OF USE OF THIRD-PARTY LINKS TO REPOSITORIES

A blog post entitled “*How Researchers Can Use Inbound Linking Strategies to Enhance Access to Their Papers*” [2] described how Kelly has used Academia.edu, ResearcherID, Scopus, Researchgate, Mendeley, Microsoft Academic Search and Google Scholar Citations. These services have been evaluated to gain an understanding of the benefits they may provide to the

research community. As part of the evaluation, links to peer-reviewed papers published by one of the authors of this paper, which have been deposited in Opus, the University of Bath institutional repository, have been added to the author's profile on these services.

The download statistics for papers by UKOLN members of staff show that 15 of the top 20 most downloaded papers have been written by one of the co-authors of this paper (Kelly), who also has the largest total number of downloads in the repository [3]. It is suggested that the popularity of these papers is due to significant numbers of inbound links from third-party services. Other possible reasons for the high numbers of downloads include:

- 1 The papers may have been promoted through use of social media.
- 2 The papers may be of more interest than others published by colleagues in the department.
- 3 Co-authors may have helped to promote downloads.
- 4 The papers are of significantly higher quality than other papers.

- 5 The papers are published in HTML format which is more easily processed by search engines.

Reason (1) is certainly true for the most downloaded paper [4] (which is the third-most downloaded paper in the repository [5]) since most of the downloads took place shortly after a blog post was published about the availability of the paper [6]. However other popular papers were published between 2005 and 2008, before Twitter was used and before the author's blog was used to highlight newly published papers.

Reason (2) may be the case for a number of papers but there are also other papers of general interest hosted in the repository which have seen few downloads.

Reason (3) is not felt to be the case. Indeed alternative copies of papers are hosted in co-authors repositories, thus fragmenting the totals for the usage statistics [7].

The author does deposit HTML versions of papers in the repository. Reason (5) may have some merit but further consideration is beyond the scope of this paper.

| Ref. No. | Institution | Academia | LinkedIn | LinkedIn | ResearcherID | Google Scholar Citations |
|----------|----------------------------|---------------|----------------|---------------|--------------|--------------------------|
| | | | (Followers) | (Current) | | |
| 1 | University of Birmingham | 1,552 | 4,657 | 3,045 | 83 | 7 |
| 2 | University of Bristol | 1,713 | 4,085 | 3,376 | 246 | 61 |
| 3 | University of Cambridge | 5,528 | 8,148 | 7,321 | 436 | 85 |
| 4 | Cardiff University | 1,534 | 3,960 | 3,417 | 456 | 39 |
| 5 | University of Edinburgh | 3,560 | 6,542 | 5,911 | 251 | 73 |
| 6 | University of Glasgow | 1,685 | 3,503 | 942 | 286 | 74 |
| 7 | Imperial College | 1,431 | 8,392 | 6,675 | 429 | 81 |
| 8 | King's College London | 2,370 | 5,620 | 24 | 0 | 35 |
| 9 | University of Leeds | 2,835 | 5,812 | 6,449 | 207 | 44 |
| 10 | University of Liverpool | 1,405 | 3,661 | 4,330 | 155 | 29 |
| 11 | London School of Economics | 2,000 | 7,763 | 2,033 | 39 | 39 |
| 12 | University of Manchester | 3,872 | 7,124 | 7,955 | 291 | 80 |
| 13 | Newcastle University | 1,164 | 3,968 | 3,230 | 186 | 93 |
| 14 | University of Nottingham | 2,022 | 5,751 | 6,508 | 315 | 55 |
| 15 | University of Oxford | 7,059 | 8,699 | 9,475 | 372 | 129 |
| 16 | Queen's University Belfast | 1,184 | 2,169 | 2,169 | 17 | 27 |
| 17 | University of Sheffield | 1,830 | 4,645 | 5,748 | 268 | 39 |
| 18 | University of Southampton | 1,836 | 4,592 | 5,005 | 274 | 57 |
| 19 | University College London | 4,663 | 10,056 | 6,791 | 690 | 161 |
| 20 | University of Warwick | 1,894 | 4,038 | 3,044 | 206 | 31 |
| | TOTAL | 51,137 | 113,385 | 93,448 | 5,599 | 1,239 |

Table 1: Statistics of Several Social Web Services by Russell Group Universities

Although the author has published highly ranked papers on accessibility [8] he is confident that papers produced by colleagues in the department are of higher research quality and merit. The conclusion which is drawn from these considerations is that SEO linking factors can have a significant influence on the number of downloads.

In light of this personal evidence the author feels that repository managers should be proactive in encouraging researchers to provide links to their papers from popular third-party services although it is recognised that further investigation is needed to validate these speculations and explore their relevance in a wider context.

3. EVIDENCE OF USE OF SOCIAL MEDIA SERVICES ACROSS RUSSELL GROUP UNIVERSITIES

In blog posts entitled “Warwick people on external profile sites” [9] and “1,670 Warwick people on Academia.edu?” [10] Delasalle documented evidence of take-up of a range of third-party services including Academia.edu, ResearcherID, Researchgate and Mendeley across the University of Warwick.

This work led to a more comprehensive survey by Kelly of use of such services across the 20 Russell Group universities in the UK [11]. The aim of this work was to investigate whether there is significant take-up of such services and, if so, what interventions may be appropriate in order to exploit SEO benefits which such use may provide. The survey analysed use of Academia.edu, LinkedIn, ResearcherID and Google Scholar Citation. These were chosen as they are likely to be used by researchers, can provide links to researchers’ papers and are publicly available so that the content can be harvested by Google.

The survey was repeated on 16 May 2012 and the updated findings are given in the Table 1.

In order to ensure that findings can be reproduced the survey “paradata” [12] is documented. In particular note:

- As described by Delasalle [8] the data for Academia.edu was obtained by entering the institution’s name in the search box; the number of entries were then displayed.
- The LinkedIn statistics include the numbers of followers of the institutional papers and the current number of members.
- The data for ResearcherID usage was obtained by entering the name of the institution in the advanced search form and using the data for the first occurrence of the name. Note that there may be additional users who are registered under a variant of the institution’s name.

4. IMPLICATIONS OF THE FINDINGS

From the evidence provided in Table 1 we can see the popularity of LinkedIn across Russell Group universities. As described in [13] this can be beneficial for raising the visibility of research publications:

Your profile can be an excellent source of SEO-friendly links because:

- *LinkedIn has great authority in Google*
- *Your website links can be given unique anchor text with the dofollow attribute*
- *Your LinkedIn profile can have highly relevant content relative to the websites you own*

The personal experiences of the benefits of maximising links to peer-reviewed papers together with the evidence of the popularity of a number of these services suggest that institutions will gain benefits in raising the visibility of their research outputs if support and encouragement is provided to researchers so that additional inbound links are provided to papers hosted on institutional repositories.

5. HOW COMMERCIAL PUBLISHERS ARE USING SOCIAL MEDIA

Several commercial publishers are encouraging authors to use social media to drive traffic to papers hosted on publishers’ web sites. For example Taylor and Francis’s journal author services web site describes how [14]:

LinkedIn: LinkedIn is an interconnected network of experienced professionals from around the world with over 55 million members. It is not just for career opportunities. When you create your profile that summarizes your professional expertise and accomplishments, why not include a mention of your articles?

Twitter and Facebook: authors are increasingly promoting their content via Twitter and Facebook so it can be picked up by other researchers and practitioners. Place an announcement on your Twitter or Facebook page highlighting the publication of your article with a link to direct people to the online version.

A Springer resource on “*Online Tools and Social Media*” [15] describes how authors can make use of services such as Facebook, LinkedIn and Google+ to market research papers to a global audience.

In comparison an equivalent Sage resource covers use of more mainstream social media-sharing services: YouTube, Flickr and Slideshare [16]. They do, however, provide advice on SEO for their authors [17].

Finally the Oxford Journals “Social Media Author Guidelines” resource [18] is comprehensive, covering blogs, Twitter, Facebook and YouTube, as well as listing services such as LinkedIn and Quora.

6. FURTHER WORK

Since the importance of metrics for institutional repositories is becoming widely accepted [19] researchers will be looking at ways in which their papers can be made more easily discovered by their peers. This paper suggests that a pro-active policy in providing links to research papers hosted in institutional repositories from popular services which are provided for use by researchers can provide a simple and ethical approach to enhancing access to research publications.

There are risks that the approaches outlined could form the basis for what could be described as an "Academic Profile Optimisation" industry. Whether such approaches would be regarded as a legitimate approach for raising the visibility of one's research activities or as a disreputable approach which undermines the objectivity of the research culture will be a softer issue that would need to be addressed in further work.

Further work is planned to investigate whether such links are responsible for enhancing SEO rankings of resources hosted in institutional repositories. This will include use of SEO analysis tools such as Linkdiagnosis.com¹, Open Site Explorer² and Majestic SEO³ in order to document SEO characteristics of repositories.

The provision of papers in HTML format may help to increase visibility in search engines. It will therefore be necessary to investigate the relevance of file formats in enhancing visibility of research papers on the web and not focus solely on inbound links.

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